

Day 15 – Greener Challenge | Project Green Challenge 2025

Name: JUBAYER IBNE OMAR

PGC Username : jubayeribneomar

School: Jahangirnagar University

Instagram Post Link : <https://www.instagram.com/p/DP3IRPWE823/>

Understanding Soil Health :

From the video “*What is Regenerative Agriculture?*” by **Kiss the Ground**, I learned that **soil is alive** — full of microbes, fungi, and tiny organisms that work together to grow healthy plants, hold water, and store carbon.

When soil is overused or treated with chemicals, it loses life and structure.

Regenerative gardening brings soil back to life by using compost, natural fertilizers, and diverse plants that protect and feed the earth.

Healthy soil means healthy food, clean air, and a cooler planet. 🌱

My Regenerative Rooftop Garden Plan (Bangladesh)

Garden Space

I chose my **rooftop** as the perfect space for a **regenerative garden**.

It gets lots of sunlight, stays airy, and allows me to reuse materials like old buckets, pots, and kitchen scraps.

My goal is to grow local herbs, vegetables, and flowers that improve soil health, attract pollinators, and support a sustainable lifestyle.

Plant Selection :

1. **Tulsi (Holy Basil)** – Purifies air, attracts bees, and improves soil health.
2. **Tomato** – Easy to grow in pots, provides food, and supports microbial life.
3. **Spinach (Palong Shak)** – Adds organic matter and nutrients to the soil.
4. **Marigold** – Repels pests and attracts butterflies.
5. **Lemongrass** – Prevents soil drying, repels mosquitoes, and smells great.
6. **Rose** – Adds beauty, supports pollinators, and connects people emotionally to nature.

Why I Chose These Plants

1. Tulsi (Holy Basil)

Why I chose it:

Tulsi grows easily in Bangladesh's warm weather and has deep cultural and medicinal value.

Benefits:

- **Soil:** Helps improve microbial activity and keeps the soil healthy.
 - **Climate:** Absorbs carbon dioxide and releases oxygen even at night.
 - **People:** Used in herbal tea and traditional medicine for immunity and stress relief.
-

2. Tomato (টমেটো)

Why I chose it:

Tomatoes are simple to grow in pots and provide nutritious food year-round.

Benefits:

- **Soil:** Adds organic matter after each harvest; roots support soil organisms.
- **Climate:** Growing locally reduces the carbon footprint of store-bought tomatoes.
- **People:** Rich in vitamins A and C — a great source of nutrition for families.

3. Spinach (Palong Shak)

Why I chose it:

Spinach is fast-growing, nutrient-rich, and grows well in rooftop containers.

Benefits:

- **Soil:** Leaves return nutrients when composted, improving soil fertility.
- **Climate:** Low water requirement — a climate-friendly leafy crop.
- **People:** Provides iron, vitamins, and fiber — important for a healthy diet.

4. Marigold (গাঁদা ফুল)

Why I chose it:

Marigolds are colorful, easy to care for, and naturally repel pests.

Benefits:

- **Soil:** Keeps pests away, reducing the need for chemical sprays.
- **Climate:** Supports pollinators that maintain ecological balance.
- **People:** Brings joy, fragrance, and can be used for decoration or prayer.

5. Lemongrass

Why I chose it:

Lemongrass thrives in containers and adds a fresh aroma to the rooftop.

Benefits:

- **Soil:** Its dense roots prevent erosion and hold soil together.
 - **Climate:** Deters mosquitoes, reducing the need for chemical repellents.
 - **People:** Can be used for tea and has health benefits like boosting digestion and immunity.
-

6. Rose (গোলাপ)

Why I chose it:

Roses are timeless flowers that attract bees and beautify the garden.

Benefits:

- **Soil:** Encourages beneficial insects that help pollinate other plants.
- **Climate:** Supports biodiversity and pollinator habitats.
- **People:** Symbol of beauty and emotion; rose water and petals can be used naturally in skincare.

Overall Benefits of My Rooftop Garden Plants

The plants in my rooftop garden — Tulsi, Tomato, Spinach, Marigold, Lemongrass, and Rose — work together to create a small but powerful ecosystem that supports **soil health, climate balance, and human wellbeing**.

Soil Benefits:

These plants keep the soil alive and fertile. Their roots help hold soil together, preventing erosion, while fallen leaves and compost return nutrients back to the earth. By using natural compost and avoiding chemicals, I can encourage helpful microbes and earthworms to thrive — turning my rooftop pots into living, healthy soil systems.

Climate Benefits:

Plants absorb carbon dioxide and release oxygen, helping reduce greenhouse gases and cool the local environment. Growing food and flowers locally also cuts down on transportation pollution. Practices like rainwater collection and mulching save water, while diverse plants attract pollinators, support biodiversity, and make the rooftop a small green zone in the city's heat.

♥ People Benefits:

These plants provide fresh, organic vegetables and herbs that improve health and nutrition. Flowers like marigold and rose bring beauty, fragrance, and emotional peace. Tulsi and lemongrass add natural healing benefits. Gardening itself reduces stress, builds connection to nature, and inspires others to live more sustainably.

🌿 In short:

My rooftop garden is not just about growing plants — it's about **regenerating life**. It rebuilds soil, cools the air, supports pollinators, and nourishes both body and mind. Even a small space can make a big difference for people and the planet. 🌸

Sketch of my garden



My regenerative rooftop garden plan 🌿
I'll grow Tulsi, Tomato, Spinach,
Marigold Lemongrass, and s. Excited
Excited about compostion,nd using
companion planting! #PGC2025

Regenerative Practices for My Rooftop Garden

▣ 1. Composting Kitchen Waste

I will collect vegetable peels, fruit scraps, dry leaves, and eggshells from my kitchen to make natural compost on my rooftop.

How it improves soil health and supports biodiversity:

Compost adds rich organic matter that feeds beneficial soil organisms like worms, bacteria, and fungi. These microbes help create healthy, fertile soil that holds moisture and nutrients better. By using compost instead of chemical fertilizers, I reduce pollution and help build a living soil ecosystem that supports a wide range of tiny life forms — the foundation of biodiversity.

2. Mulching

I'll cover the top of my pots with dry leaves, rice husks, or coconut fiber to protect the soil.

How it improves soil health and supports biodiversity:

Mulch keeps the soil cool and moist, reducing evaporation and preventing erosion. As the mulch breaks down, it adds natural nutrients to the soil, improving its texture and fertility. This creates a stable environment where soil microbes, insects, and small organisms can thrive, supporting a more balanced and biodiverse rooftop ecosystem.

3. Companion Planting and Pollinator Support:

I'll grow flowers like marigold and rose alongside herbs and vegetables such as tulsi and tomato.

How it improves soil health and supports biodiversity:

Companion planting allows different plants to benefit one another — for example, marigolds naturally repel pests, while flowers attract bees and butterflies. This reduces the need for harmful pesticides and increases pollinator activity, improving plant reproduction. The mix of plant types strengthens the soil and creates a diverse, self-sustaining ecosystem full of pollinators and beneficial insects.

♥ Reflection

Creating this rooftop garden plan made me realize how much life soil can hold — even in small pots above the ground.

Every seed I plant helps rebuild soil health, clean the air, and support pollinators.

I feel proud knowing my rooftop can become a **mini ecosystem** — growing healthy food, reducing waste, and healing the earth one plant at a time. 🌿

Instagram Post screenshot :

